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SPORTS AVIATION IN THE WORLD AND YUGOSLAVIA AFTER SECOND WORLD WAR

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Abstract: After World War II, the accelerating demand for personal and utility aircraft gave rise to the term *general aviation* to describe all flying that did not fall into the category of military or scheduled air transport. Immediately before the liberation, the first aviation organization in Yugoslavia was formed in Zemun in 1944. In March 1945, the Air Force Command established the Gliding Center in Vršac, and in April classes for the first class of gliding teachers began. The first aero-clubs began to operate within the Commission for Technology and Sports, at the beginning of 1946 (later Narodna tehnika). The Aviation Association of Yugoslavia (Vazduhoplovni savez Jugoslavije – VSJ) was founded on April 25, 1948 in Belgrade. In 1950, he renewed his membership in the FAI, was unanimously accepted as a member at the 43rd general conference held in Stockholm.

Keywords: Yugoslavia, air sports, The Aviation Association of Yugoslavia, Vazduhoplovni savez Jugoslavije – VSJ, FAI

Introduction

No matter how unusual it is, very little has been written about the history of sports aviation, not only in our country but also in the world. This is an attempt to briefly summarize the development of sport aviation in Yugoslavia for the first ten years after the Second World War, although due to the continuity of the story in several cases we have to extend the considered period up to around 1960.

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As a basic source, we used the memorandum "20 years of the Yugoslav Air Force", which used to be in the Technical Directorate of the General Staff of the JNA (*The Yugoslav People's Army*). We do not know where he is today. Unless otherwise stated, data from that memorandum was used.

After World War II, the accelerating demand for personal and utility aircraft gave rise to the term *general aviation* to describe all flying that did not fall into the category of military or scheduled air transport. Manufacturers such as Piper, Cessna, and Beechcraft represented an expanding "light plane industry," although the general aviation sector included a host of modified aircraft that ranged from war surplus. For the light plane builders, engine manufacturers perfected efficient horizontally opposed piston engines that produced from 65 to more than 200 horsepower; mass production made them dominant in international applications; several appeared as turbo-supercharged designs delivering more than 300 horsepower. (See more in: Underwood J., Collinge G., 1970)

The first aviation organization in the new Yugoslavia was founded in 1944 in Zemun under the name Sports Aviation Association "Belgrade". Although with scarce material and technical resources and with a small number of trained personnel, that first aviation organization very quickly began to train personnel for the needs of aviation units at the front.

After the liberation of the country, with the involvement of numerous aviation enthusiasts, new sports aviation organizations were created, which developed activities first in aviation modeling and sailing, and later in other branches of aviation sports.

So, for example, in Zagreb, as early as May 15, 1945, a group of young people started work on aviation modeling and sailing. A modeling school and the first home sailing group were soon formed. And in other parts of the country, aviators are beginning to gather, renewing aeronautical sports activities, forming circles and groups working in modeling and sailing. This activity was recorded in Slovenia, Bosnia and Herzegovina and Macedonia.

The AF command immediately began organized and focused work on creating material and other conditions for the development of aviation and sports organizations in Yugoslavia. The AF Command also immediately began to work on the preparation of teachers for sailing, which, along with the construction of sailboats, had a decisive impact on the even development of aviation and sports organizations in all parts of the country.

Immediately after the war, the VSJ (*The Aviation Association of Yugoslavia, further - VSJ*) organizations had modest material resources at their disposal. Measures were taken to collect, repair and equip all available means of airplanes, gliders, winches and parachutes so that they could be used to the maximum extent for training. Design bureaus were established in Zagreb and Ljubljana. which brought together constructors and aviation

enthusiasts. They immediately began to design and build the first aviation gliders. This is how a mass self-building movement developed in VSJ, which produced outstanding results. The AF command immediately started with the planned direction of designing and building gliders and airplanes, as well as the training of teachers.

So already in 1945, the construction of glider gliders for initial training of the "Sparrow" type and at the same time the "Seagull" type glider began. This creates the conditions for the organized development of sailing industries throughout the country.

Formation of The Aviation Association of Yugoslavia

In September 1945, the Communist Party of Yugoslavia (KPJ), through the SKOJ Central Committee (*League of Socialist Youth of Yugoslavia*), gave the initiative to form an aviation-sports organization in the country, and already on November 21, 1945, a meeting of aviation representatives from all over the country was organized. with the aim of finding solutions for the implementation of the KPJ initiative.

By the end of 1945, fifteen aviation organizations with 1,190 members had already been founded (in Serbia, 6 with 450 members, in Croatia, 5 with 309 members, in Slovenia, 2 with 220 members, in Bosnia and Herzegovina, one with 60 members, in Macedonia (*The current one North Macedonia*), one with 80 members) in which modeling groups and the first sailing courses worked.

The year 1946 is significant for the further development of aviation sports organizations and for the search for organizational and other solutions for the planning and unification of aviation sports in the country.

On November 22, 1946, the first meeting of representatives of aviation organizations was held in Belgrade, where experiences were exchanged and certain tasks for the further development of aviation and sports organizations were exchanged. Intensive work has begun. Instead of groups and circles, which until then were mostly unconnected, initiative committees are created which, at the founding assemblies, elect management, adopt rules and thus form sports aviation societies.

In 1946, 22 sports aviation clubs were already operating in Yugoslavia (in Belgrade, Zagreb, Ljubljana, Maribor, Novi Sad, Osijek, Varaždin, Slavonski Brod, Sisak, Sušak, Sombor, Subotica, Vršac, Split, Sarajevo, Skopje), and their work was united by the initiative committee for sports and aviation at the Technical and Sports Commission of the Central Committee of the USAOJ.

On September 28 and 29, 1947, the second federal consultation of representatives of aviation organizations was held in Belgrade, which promoted organized and planned work on the development of aviation sports in Yugoslavia.

In the same year (1947), the federal pilot school started working in Zagreb (the following year it was moved to Ruma). The sailing center in Ribnica continued to work. The federal sailing center in Vršac was handed over to the management of sports aviators. The Utva factory produced the first series of school sailboats. All this enabled the mass training of sailors.

That year, republican committees for sports aviation were formed. In Slovenia, the Aviation Association of Slovenia was formed at the end of 1945, and in Croatia, the Republic Committee was formed in 1946.

In the period 1945 - 1947, sport aviation in Yugoslavia was largely a closed organization whose activity was considered semi-military. However, there were a lot of aviation events and landings, meetings, competitions and various gatherings, and propaganda about aviation sports immediately began to acquire an organized and socially oriented character.

In March 1947, the magazine "Narodna krila" began to be published, which played a significant role in the organizational connection of aviation societies and republican organizations.

The year 1948 is considered a turning point, due to significant events in the development of sport aviation in Yugoslavia. In February, a meeting of representatives of "Technology and Sport" and Central Committee of KPJ was held with the aim of finding better organizational solutions. The decision was made to separate "Technique and Sport" from the Physical Education Association and to form it as an independent mass organization. On April 19, 1948, at the Second Congress of the Yugoslav Physical Culture Association, the organization "People's Technique" was formed, which included sports aviation.

The Yugoslav Aviation Association was constituted on April 25, 1948, at the founding assembly of the "Sports Aviation Association", which consisted of representatives of 32 aviation organizations and initiative committees for sports aviation of all republics and autonomous provinces, which represented about 7,200 members.

It can be considered that in that year the phase of renewal and consolidation of sports aviation was completed and that VSJ was organizationally defined with basic organizations that were named "aviation societies". The following year, on November 20, at the Fourth Plenum of the Federal Board of the VSJ in Belgrade, a decision was made to rename aviation societies into aero clubs.

The Federal Board (SO) was the highest body of the VSJ. In its composition, it has a professional service, auxiliary bodies and commissions: for aviation education and propaganda, for aviation sports, for motor flying, for gliding, for parachuting, for model making; then, the disciplinary commission and the international relations commission. Similar commissions were formed by republican committees. With occasional changes,

forming new commissions, the system of leadership in the Supreme Court was constantly improved.

After the founding assembly, a very significant period of strong development of the VSJ began. In addition to professional work in all branches of aviation activity, aviation sports also began to develop more strongly.

Due to the well-known conflict with the Informburo, the worsening international situation and strong pressure from the Eastern Bloc, our country was threatened with danger, so it was necessary to organize the country's defense preparations in every way. VSJ was then tasked with mass training modellers, sailors, paratroopers and motor pilots, who, in addition to expert aviation knowledge, were supposed to develop patriotism, courage, determination and other military qualities needed for the defense of the country. In carrying out these responsible tasks, the Supreme Court enjoyed great support from the state, which allocated large material resources for the organization's needs. (Ratno vazduhoplovstvo i protivvazdušna odbrana, 1989, 371)

At the beginning of 1948, the alliance had 11 airports with hangars, 60 model workshops, 12 sailing schools. eight aircraft repair workshops. The Federal Pilot School in Ruma and the Aviation and Sailing Center in Vršac.

The process of organizational development of the VSJ, along with the normative, statutory and legal regulation of all issues of social activities, lasted approximately until 1952. At that time, the Association represented a modern aviation sports organization in terms of organization and overall activities.

Around 1950, although VSJ did not reach optimal development in all republics and provinces, it represented an extraordinary force, thanks to considerable material and technical resources. He especially strengthened in terms of personnel, because he trained high-quality athletes. Even then, he began to achieve his first successes in international sports.

From 1950 to 1960, VSJ reached the highest level of its development. It was a period of extraordinary work and great results in all branches of activity. In that period VSJ achieved the greatest results in sports at world and European competitions. Then the system and rules of sports competitions were fully developed.

During the first eight years (1945 – 1953), the following were trained at the VSJ:

- of aviation modelers 17,306
- pilots - sailors 8,483
- 21,380 paratroopers
- motor pilots 1,568

Among those trained, there is a large number of teachers who completed their education in federal educational institutions. (Ratno vazduhoplovstvo i protivvazdušna odbrana, 1989, 376).

The Aviation Association of Yugoslavia at its peak

In the spring of 1953, the Yugoslav Air Force had considerable material and technical resources at its disposal, most of which it obtained directly or with the support of the Air Force. At that time, VSJ had: 127 airplanes, 218 gliders, 331 parachutes, 57 means of transport, 48 aviation schools (aviation clubs), 11 aviation centers, 63 airports, hangars, 12 aircraft repair workshops, 96 aviation modeling workshops and schools, and 6 design bureaus. (Avioni Jugoslovenskog ratnog vazduhoplovstva domaće konstrukcije i izrade 1946 – 1949; Pregled predatih aviona vazd. savezu Jugoslavije; Stanje aviona po godinama 1946 – 1965; Бопба 21. maj 1953, 1)

A large number of young pilots, of gliders, paratroopers and modelers trained in VSJ went to the Air Force, where they continued to train as active military officers.

Giving special recognition for successful work and receiving the patronage of the VSJ in May 1952, president Tito greatly contributed to the affirmation of the VSJ in society. (Бопба 21. maj 1952, 1) This created even more favorable conditions for his successful work and overall activity.

At the First Congress of the VSJ, in May 1953, which was attended by 183 delegates, a much broader and more versatile work program was established. At that congress, VSJ, in an organizational sense, separated itself from the composition of the National Technology and became an independent social organization. (Бопба 21. maj 1953, 1 – 2)

At the Second Congress, which was held in December 1956, with the participation of 178 delegates and 150 guests, the program envisaged that, in addition to professional training and coaching, greater attention should be paid to the massing of organizations, especially greater involvement of young people.

The Congress advocated that modeling be developed in schools, that as many professional aviation personnel as possible be included in the Aero Clubs and bodies of the VSJ, and that greater cooperation be developed with the Yugoslav People's Technique and the Association for Physical Culture of Yugoslavia.

All of that required finding new forms of aviation and technical education for working with aviation youth and developing sports activities on a much broader basis.

According to the five-year cross-sections of the state of the material and technical base, it is obvious that during the entire development period VSJ had the appropriate

number of airplanes, gliders, parachutes and kites, which enabled it to perform its social function.

It also had 59 sports airports, with the same number of hangars and warehouses, 41 aircraft maintenance workshops, 75 vehicles and 18 autovitals, as well as numerous classrooms, trainers, training grounds and other facilities necessary for work. Sports airports, in addition to providing all the conditions for training, exercise and sports, are also of great importance for national defense.

Immediately after the war, the production of technical equipment necessary for the activity of VSJ organizations began, primarily gliders and airplanes. Special attention was paid to the design and production of gliders and sports planes.

In the companies of the aviation industry and in the workshops established in the VSJ in Ljubljana, Zagreb, Skopje, Novi Sad and Vršac, young constructors, members of the VSJ, created 12 types of sports and tourist aircraft (some of which were also produced in series) and 26 types school training. highly capable and acrobatic sailboats "Orao", "Košava" and "Meteor", which represented high achievements in sailing in the world. (Avioni Jugoslovenskog ratnog vazduhoplovstva domaće konstrukcije i izrade 1946 – 1949; Бопба 29. maj 1949, 6)

In 1951 - 1952, the Yugoslav Air Force, before others in the world, introduced a two-seater glider for the training of gliders. The two-seater "stork" sailboat from that period, which was produced in larger series, played a major role in the basic training of sailors. Later, that task was performed on the sailboats "cirus" and "libis 17".

VSJ members constructed 12 types of light sports aircraft and 26 types of gliders, some of which, due to their superior qualities, represented the world range.

The military industry produced 80 training sports planes "Trojka", a large number of gliders for VSJ. parachutes and other equipment, and AF handed over to the Alliance a large number of light aircraft, spare parts and other equipment necessary for mass work. (Avioni Jugoslovenskog ratnog vazduhoplovstva domaće konstrukcije i izrade 1946 – 1949.; Pregled predatih aviona vazd. savezu Jugoslavije)

Sports – tourist aircraft 251 Troika was developed on the basis of tender TKV2 no. 1940/46 for sports-tourist aircraft. The first flight of the prototype, made in Ikarus, was on October 6, 1947. In 1949, 57 Troika aircraft were delivered, and in 1951, another 23 aircraft were delivered to AF. Out of a total of 80 produced in the Utva factory Troika aircraft 73 were handed over to the Aviation Association of Yugoslavia, while the remaining 7 were scrapped in the air force before handing over. (Avioni Jugoslovenskog ratnog vazduhoplovstva domaće konstrukcije i izrade 1946 – 1949.; Izveštaj sa ispitivanja serijskog aviona Trojka; Stanje aviona po godinama 1946 – 1965; Pregled predatih aviona vazd. savezu Jugoslavije; Đokić N., 2023, 17 – 23; Oštrić Š., 1996, I – IV)

The state paid great attention to the VJ, especially in the affirmation of aviation sports. The number of competitions and parades at federal landings represented real experiences for observers and a kind of aviation propaganda. The experiences and results achieved at those competitions contributed to our athletes achieving many international successes.

Thus, in 1950, at the world sailing championship in Sweden, our sailors took 3rd and 4th place. In the same year, our modeler also won first place in Sweden at the world championship, and the same success was repeated in Austria in 1952. Our parachutist at the First World Championship, held in Bled in 1951, he took second place overall.

Those and numerous other successes in aviation sports had a great resonance in our public, as well as among the members of the International Aeronautical Federation (FAI), where our sports workers developed great activity. VSJ was accepted as a member of FAI in 1950.

Along with the massification of organizations, further improvement of the form of sports competitions continued, which became more massive and rich, so that aviation sports recorded new successes in domestic and international competitions.

By 1960, Yugoslav modelers had once again become world champions, repeatedly winning European championships and setting world records. In 1954, the sailors became world champions in the two-seater category, in 1956 they won second place, and in 1956 and 1958 they took fourth place in the world in the single-seater category.

Motor pilots twice won first place at European air rallies.

In the fall of 1956, a center was organized in Vršac for the transportation of sick and injured persons by VSJ planes to the nearest hospital at distances of up to 200 km from Vršac. This service functioned until the beginning of the sixties. (Борба 10. октобар 1956, 2)

Propaganda and publishing activity and information contributed significantly to the development of VSJ. VSJ published magazines, newspapers and other publications. In addition to the magazine "Narodna krila", which was founded in 1947 and was published until 1953, "Aerosvet" was launched in 1951, which was published until 1965. "Aeronautical Gliding" was published very briefly in 1949-50. "Wings", which are printed in the Slovenian language, were published from 1957 to 1959.

The professional magazine "Modelar" was published in 1949-1950. The "Bulletin of the Federal Board" began publication in 1950 and ceased publication in 1975. In the overall activity of VSJ, ever since its foundation, work with aviation youth has always been on the agenda.

Conclusion

Due to the lack of materials and personnel, as well as inappropriate forms of gathering, the expected results were not achieved in working with children. Only after the First Congress of the VSJ in 1953, when the "Small Aviation Association" was founded, as well as after the establishment of the "Selenite Movement" in 1955 (which, in addition to modeling, was involved in astronautics and rocket technology) were favorable conditions created for working with aviation youth during the sixties. (Васиона бр. 1/1961, 36)

Since the clubs worked, mostly, in primary schools, VSJ organized the training of more than 3,000 educational workers, mostly technical education teachers, to work with children, i.e. implement programs. It also ensured the production of model rockets, kites and other necessary means of work. At that time, the youth aviation clubs represented the only form of technical education for elementary school students and were the forerunners of the young technicians' clubs. which later developed within the framework of the National Technical Organization. (Васиона бр. 1/1961, 36)

Educational and professional work in the aviation youth clubs took place according to the programs of the VSJ, with considerable funds and modeling material, which was produced in large quantities in our country. So, for example, in 1954, modeling material was produced in the following companies: „AERO“ Beograd, „AVIOTEHNA“ Zagreb, „AVIOSERVIS“ Sarajevo and in workshops in Novi Sad and Vršac.

From 1954 until the beginning of the 1960s, aviation youth and modeling were on the rise. In 1957, a center for aviation modeling was established in Belgrade. That period is significant for many events, exhibitions, rallies, competitions, artistic, literal and other manifestations, and even many schools published "Selenite papers". While, for example, in 1954 there were only four types of model sets for working with children, in 1960 there were already 16 types.

The strong development of the modeling technique had a significant impact on the expansion of the program and the content of the work, as well as on the development of mass. The number of clubs increased from 318 to 886, and membership from 12,466 to 53,782. It is a period of extraordinary mass work with children. In that period, the new system of training and teaching separates the social educational work of the aviation youth from training in modeling. That demarcation was a useful innovation because it imposed the need for further systematization and improvement of all curricula. Such an orientation gave extraordinary results.

After the 1960s, the social and educational work with children dropped sharply and the number of clubs and members of the aviation youth decreased. The lack of financial resources (for the overall activity of the VSJ) first reduced the programs of work with the aviation youth. and at the same time the training of modellers stops,

because the material base for working with aviation subframes and for modeling is negligible. Namely, the industry no longer produced the necessary material for models.

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